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Multiplying Algebraic Fractions

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Examples

Workout

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Question 1: Express the following as a single fraction.

(a) $\frac{2}{g} \times \frac{3}{h}$

(b) $\frac{3}{c} \times \frac{a}{4}$

(c) $\frac{w}{x} \times \frac{3}{a}$

(d) $\frac{3a}{7} \times \frac{2c}{g}$

(e) $\frac{a}{e} \times \frac{f}{b}$

(f) $\frac{e}{8} \times \frac{d}{8}$

(g) $\frac{x}{2} \times \frac{x}{5}$

(h) $\frac{7}{y} \times \frac{2}{y}$

(i) $\frac{3}{w} \times \frac{x}{4} \times \frac{y}{w}$

(j) $\frac{2x}{5} \times \frac{3x}{7}$

(k) $\frac{x}{y} \times \frac{x}{y}$

(l) $\frac{6a}{7c} \times \frac{5a}{c}$

Question 2: Express the following as a single **simplified** fraction.

(a) $\frac{2x}{y} \times \frac{y}{4}$

(b) $\frac{3a}{c} \times \frac{5}{6}$

(c) $\frac{4}{5a} \times \frac{5w}{8}$

(d) $\frac{3a}{7} \times \frac{2c}{9}$

(e) $\frac{10g}{w} \times \frac{w}{5}$

(f) $\frac{4x}{5y} \times \frac{3y}{8x}$

(g) $\frac{2y}{3} \times \frac{2y}{wy}$

(h) $\frac{6x}{5y} \times \frac{4x}{3y}$

(i) $\frac{x^2}{a} \times \frac{a^2}{x^2}$

(j) $\frac{ab}{c} \times \frac{c}{ae}$

(k) $\frac{6c}{w^2} \times \frac{15w^3}{2c^2}$

(l) $\frac{2a^4}{3b^3} \times \frac{6b^2}{5a}$

(m) $\frac{2a^3b}{3} \times \frac{6}{ab^2}$

(n) $\frac{x^4y^4}{z^2} \times \frac{z}{x^6y}$

(o) $\frac{14a^2bc^3}{9} \times \frac{6b^3}{21a^3c}$

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Question 3: Express the following as a single fraction. **Simplify** if possible.

(a) $\dfrac{x}{4} \times \dfrac{x-3}{2}$

(b) $\dfrac{x}{9} \times \dfrac{6}{x+7}$

(c) $\dfrac{x+1}{15} \times \dfrac{5}{x}$

(d) $\dfrac{1}{x+3} \times \dfrac{2}{x+1}$

(e) $\dfrac{3x+2}{3} \times \dfrac{x+1}{3}$

(f) $\dfrac{x+4}{x-4} \times \dfrac{x-2}{x+5}$

(g) $\dfrac{x+1}{x-7} \times \dfrac{x-5}{x+1}$

(h) $\dfrac{7}{2x+8} \times \dfrac{x+4}{14}$

(i) $\dfrac{4}{2x-1} \times \dfrac{6x-3}{x+7}$

(j) $\dfrac{x+8}{15} \times \dfrac{10}{x^3+8x^2}$

(k) $\dfrac{4}{x-2} \times \dfrac{x^2-2x}{8}$

(l) $\dfrac{x^2+5x+6}{4} \times \dfrac{2}{x+2}$

(m) $\dfrac{x^2+2x-8}{x^2+5x+6} \times \dfrac{x+2}{x+4}$

(n) $\dfrac{x^2+x-6}{x^2-25} \times \dfrac{x^2+10x+25}{x^2-4}$

(o) $\dfrac{3x^2+8x-3}{25} \times \dfrac{30}{6x^2+13x-5}$

Answers

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